

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 November 2001 (22.11.2001)

PCT

(10) International Publication Number  
**WO 01/87187 A1**

(51) International Patent Classification<sup>7</sup>: **A61F 2/16**

Arnold [GB/GB]; The Manor House, Church Road, Mep-  
pershall, Bedfordshire SG17 5NA (GB).

(21) International Application Number: **PCT/GB01/02101**

(22) International Filing Date: **14 May 2001 (14.05.2001)**

(74) Agent: **THOMSON, Roger, Bruce**; W P Thompson &  
Co, Eastcheap House, Central Approach, Letchworth,  
Hertfordshire SG6 3SD (GB).

(25) Filing Language: **English**

(81) Designated States (*national*): **AU, BR, CA, GB, JP, RU, US.**

(26) Publication Language: **English**

(30) Priority Data:  
**0011507.1 13 May 2000 (13.05.2000) GB**

(84) Designated States (*regional*): European patent (AT, BE,  
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
NL, PT, SE, TR).

(71) Applicant (*for all designated States except US*): **DUCK-  
WORTH & KENT LIMITED** [GB/GB]; Terence House,  
7 Marquis Business Centre, Royston Road, Baldock, Hert-  
fordshire SG7 6XL (GB).

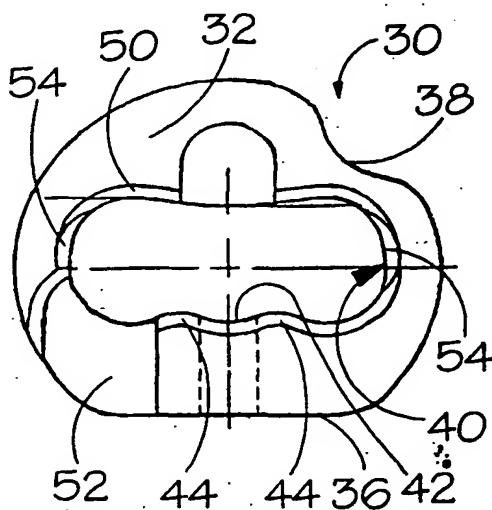
**Published:**  
— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **WALDOCK, Terence,**

(54) Title: **OPHTHALMIC LENS INJECTORS**



(57) Abstract: An instrument for the insertion of an intraocular lens into an eye comprises a body portion, e.g. a barrel, a nose portion having a lumen through which the lens passes, and a push rod connected to a plunger. Within the nose portion is an insert (30) which defines a passageway (40) therthrough. The passageway has a configuration which includes a smoothly continuous undulating surface (42, 44) upon which a lens rests. A cutout (52) accommodates the trailing haptic. For acrylic lenses, the undulating surface is preferably provided by a recess in the bottom of the passageway, the recess reducing in width and depth to define an upwardly sloping surface on which the lens is deposited.

WO 01/87187 A1

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 01/02101

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A61F2/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 620 450 A (EAGLES DANIEL C ET AL) 15 April 1997 (1997-04-15) column 6, line 49 - line 64 column 8, line 13 - line 64 column 10, line 35 -column 11, line 22; figures 1-21 ----	1-6,8,10
X	WO 99 37247 A (DUCKWORTH & KENT LTD ;WALDOCK TERENCE ARNOLD (GB)) 29 July 1999 (1999-07-29) page 2, line 20 -page 3, line 27 page 7, line 18 -page 8, line 31 page 14, line 21 -page 17, line 28; figures 1A,1B,2,12-19,24-30,32-38,49-53 ----- -/--	1-3,10, 11

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

2 August 2001

Date of mailing of the international search report

13/08/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040. Tx. 31 651 epo nl.  
Fax: (+31-70) 340-3016

Authorized officer

Arjona Lopez, G

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 01/02101

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 5 474 562 A (ORCHOWSKI MICHAEL W ET AL) 12 December 1995 (1995-12-12) column 5, line 3 -column 7, line 9; figures 1-6,14-21 ---	1,10 2,6,10
X Y A	US 5 928 245 A (CHAMBERS THOMAS J ET AL) 27 July 1999 (1999-07-27) column 6, line 25 -column 9, line 22 figures 1-17 ---	1-3,10 4-7 9
X Y	US 5 275 604 A (RHEINISH ROBERT S ET AL) 4 January 1994 (1994-01-04) column 4, line 32 -column 6, line 33; figures 1-6 ---	1,10,12 4-7
X A	WO 99 21513 A (BLAKE LARRY ;CURRIE GENE (US); TEKIA INC (US)) 6 May 1999 (1999-05-06) page 22, line 9 -page 23, line 2; figures 1,1A,1B,4A-4F -----	1 12

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 01/02101

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5620450	A	15-04-1997	US 5499987 A	19-03-1996
			US 5941886 A	24-08-1999
			US 5860984 A	19-01-1999
			US 5928245 A	27-07-1999
			US 6056757 A	02-05-2000
			AU 4749496 A	24-07-1996
			CA 2208997 A	11-07-1996
			CN 1172421 A	04-02-1998
			EP 0804131 A	05-11-1997
			JP 10511876 T	17-11-1998
			NZ 301954 A	28-10-1999
			WO 9620662 A	11-07-1996
			US 6162229 A	19-12-2000
			US 6174315 B	16-01-2001
			US 5616148 A	01-04-1997
			US 5772666 A	30-06-1998
			AU 714145 B	23-12-1999
			AU 4501796 A	17-06-1996
			AU 4878799 A	11-11-1999
			CA 2181472 A	30-05-1996
			CN 1143313 A	19-02-1997
			EP 0743840 A	27-11-1996
			JP 9508053 T	19-08-1997
			NZ 300317 A	26-06-1998
			NZ 329985 A	28-10-1999
			US 5902307 A	11-05-1999
			WO 9615743 A	30-05-1996
			US 5807400 A	15-09-1998
			US 5728102 A	17-03-1998
			AU 1846395 A	04-09-1995
			AU 718363 B	13-04-2000
			AU 2125399 A	20-05-1999
			CA 2183462 A	24-08-1995
			CN 1145580 A	19-03-1997
			EP 0901343 A	17-03-1999
			JP 9509086 T	16-09-1997
			NZ 281501 A	24-09-1998
			US 6048348 A	11-04-2000
			WO 9522287 A	24-08-1995
			US 6059791 A	09-05-2000
			EP 0746237 A	11-12-1996
			NZ 282170 A	26-06-1998
			US 6241737 B	05-06-2001
			US 6143000 A	07-11-2000
			AU 692425 B	11-06-1998
			AU 5349594 A	26-04-1994
			AU 717897 B	06-04-2000
			AU 6197498 A	13-08-1998
			CA 2144741 C	08-04-1997
			EP 0723429 A	31-07-1996
WO 9937247	A	29-07-1999	AU 731944 B	05-04-2001
			AU 1776199 A	19-07-1999
			AU 2177599 A	09-08-1999
			EP 0966238 A	29-12-1999
			EP 0971648 A	19-01-2000
			WO 9933411 A	08-07-1999
			GB 2335148 A	15-09-1999

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 01/02101

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9937247 A		GB 2336785 A US 6203549 B	03-11-1999 20-03-2001
US 5474562 A	12-12-1995	US 5653715 A AU 6363394 A EP 0688183 A JP 8507457 T WO 9420027 A US 6214015 B US 5860986 A	05-08-1997 26-09-1994 27-12-1995 13-08-1996 15-09-1994 10-04-2001 19-01-1999
US 5928245 A	27-07-1999	US 5772666 A US 5616148 A US 5620450 A US 5807400 A US 5941886 A US 5860984 A US 6056757 A AU 7476996 A CA 2234002 A CN 1200659 A EP 0858304 A JP 11514278 T WO 9715253 A US 6162229 A US 6174315 B AU 712574 B AU 5933996 A CA 2220370 A CN 1185098 A EP 0830083 A JP 11510711 T US 6048348 A WO 9637152 A US 6059791 A AU 720114 B AU 5309896 A CA 2215182 A CN 1185100 A EP 0957848 A JP 11506357 T WO 9628122 A US 6022358 A US 5800442 A AU 5359796 A CA 2214638 A EP 0813400 A JP 11506356 T WO 9628121 A AU 4749496 A CA 2208997 A CN 1172421 A EP 0804131 A JP 10511876 T NZ 301954 A WO 9620662 A AU 714145 B AU 4501796 A	30-06-1998 01-04-1997 15-04-1997 15-09-1998 24-08-1999 19-01-1999 02-05-2000 15-05-1997 01-05-1997 02-12-1998 19-08-1998 07-12-1999 01-05-1997 19-12-2000 16-01-2001 11-11-1999 11-12-1996 28-11-1996 17-06-1998 25-03-1998 21-09-1999 11-04-2000 28-11-1996 09-05-2000 25-05-2000 02-10-1996 19-09-1996 17-06-1998 24-11-1999 08-06-1999 19-09-1996 08-02-2000 01-09-1998 02-10-1996 19-09-1996 29-12-1997 08-06-1999 19-09-1996 24-07-1996 11-07-1996 04-02-1998 05-11-1997 17-11-1998 28-10-1999 11-07-1996 23-12-1999 17-06-1996

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 01/02101

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5928245 A		AU 4878799 A CA 2181472 A CN 1143313 A	11-11-1999 30-05-1996 19-02-1997
US 5275604 A	04-01-1994	NONE	
WO 9921513 A	06-05-1999	AU 7361898 A AU 8283298 A WO 9921514 A	17-05-1999 17-05-1999 06-05-1999